UMLS Workstation Project: Progress to Date

Gary Freiburger, Deputy Director
Sandra R. Levy, Information Specialist
Peter M. LePoer, Systems Librarian
Jane Murray, Catalog Librarian
Steven Heinold, Systems Librarian
Todd Warfield, Programmer

Health Sciences Library
University of Maryland at Baltimore
111 South Greene Street
Baltimore, Maryland 21201-1583

INTRODUCTION

In February 1992 the Library was awarded a three-year grant from the National Library of Medicine to create a Windows-based interface to the Unified Medical Language System. This interface will use the UMLS Knowledge Sources to assist users searching various databases available at the Library, including the online catalog, PsycLIT, CINAHL, MEDLINE, and HSL Current Contents®. This poster traces the evolution of the interface during its first 18 months by illustrating the revisions made to the prototype. Revisions are based on user feedback elicited in an iterative process of design, development, and review.

DESCRIPTION

The user interface was developed using Visual Basic. The first-year goal is to create a modular, transportable, stand-alone, microcomputer-based interface to the UMLS. The second-year goal is to include the UMLS as a menu option on our local area network; during the third and final year, we will extend this to serve as a generic interface to our databases.

EVALUATIONS

UMAB faculty, staff, and students are recruited to assess screen design, ease of use, reliability, speed, and help messages. Evaluations are conducted using a narrative interview format. The end goal of these evaluations is to create an interface that is consistent, clear, simple to invoke and use, and which maintains continuity within the application itself and in relation to the external databases with which it is linked.

The first series of evaluations focused on the prototype developed to express MeSH "tree" hierarchies. Three entry screen options were created. Evaluators were unanimous in their preference for the second screen option for its clarity and conceptual orientation. The other displays were rejected chiefly because they employed what users perceived as non-standard or overly-technical terms to address the conceptual relationships among vocabulary elements.

A second series of evaluations assessed users' reactions to manipulating the interface. Suggestions clustered around some central points: default operations should be more obvious; databases, not vocabularies, should be identified and selected easily; levels of skill in using both windows and the UMLS interface should be addressed; the phrase index and some of the pop-up windows should be options under the user's control; and the phrase index should be permuted. A word index was judged to have limited value.

Based on the responses gathered during the earlier evaluations, the prototype was revised and presented again. With some of the functional issues resolved, the evaluators were able to focus on other aspects, such as ambiguous button labels and some inconsistencies in the presentation of the icons and windows. Our current version of the interface addresses these criticisms.

FUTURE DEVELOPMENT

The team plans to make the interface available to users on a larger scale, and to administer the Questionnaire for User Interface Satisfaction (QUIS) to provide an objective measure of user satisfaction as we continue to assess the interface's design and functionality.

ACKNOWLEDGMENTS